



STATE OF WASHINGTON

STATE BUILDING CODE COUNCIL

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MINUTES STATE BUILDING CODE COUNCIL

Date: November 26, 2002

Location: WestCoast SeaTac Hotel

Council Members Present: Jim Lewis, Council Chair; Stan Price, Vice Chair; Dave Baker; John Cochran; Peter De Vries; Chris Endresen; Rick Ford; Bill Misocky; Steve Mullet; Steve Nuttall; Terry Poe; Dave Saunders; Dale Shafer

Council Members Absent: Rory Calhoun, John Fulginiti

Visitors Present: Sue Alden, Bob Eugene, Jerry Barbera, Tony Gale, Amy Wood, Phil Baker, Terri Hotvedt, Larry Stevens, Diane Hansen, Larry Andrews, Lee Stubbe, Kraig Stevenson, Patrick Hayes, Mark Woerman, Ken Carlson, John Forde, Kevin Watier, Jon Siu, James Gray, Anjela Foster, Frank Mellas, Brian Minnich, Dan Sexton, Sean Coney, Paul O'Connor, Mary Kate Martin, Philip Brazil, Mac McDowell, Leonard Yarberry, Scott Rushing, Chris Whitmyre

Staff Present: Tim Nogler, Al Rhoades, Krista Braaksma, Patti Thorn, Sue Mathers

CALL TO ORDER

The meeting was called to order by Jim Lewis, Council Chair, at 10:00 a.m. Jim welcomed everyone. Introductions were made.

REVIEW AND APPROVE AGENDA

The agenda was reviewed. Tim Nogler added a lunch break at 11:30 a.m. or as progress allowed. With that revision, the agenda was approved.

REVIEW AND APPROVE MINUTES

The minutes of the October 11, 2002 meeting were reviewed and approved as written.

PUBLIC COMMENT ON ITEMS NOT COVERED BY THE AGENDA

Mary Kate Martin, representing the Washington Association of Building Officials (WABO), read an E-mail stating that as of October 17, 2002, there will be no representation by the Inland Northwest HVAC Association at Council meetings regarding the issue of current versus International codes. WABO objects to Larry Andrews being listed in the IRC TAG report as representing the Inland Northwest HVAC Association.

Larry Andrews rebutted that he was authorized to represent the Inland Northwest HVAC Association at the time of the IRC meetings that the draft report summarizes. Inland Northwest paid for his travel expenses to attend those meetings. Larry said the issue of representation was subsequently revisited because of monetary constraints. The issue will again come up for a vote in December.

PUBLIC HEARING ON PROPOSED CODE CHANGES

Uniform Building Code (UBC), Elevator Shaft Pressurization

Al Rhoades called attention to the CR-102 that is the result of a TAG study of the elevator shaft pressurization issue. He pointed out the following changes in UBC language: the addition of Exception 4 in Section 403.7, the addition of Exception 2 in Section 905, and new language in Exception 4 in Section 1004.3.4.5. Al noted that pressurized elevator shafts may be used as alternates to elevator lobbies in buildings that are fully sprinklered, with both pressurized elevator and stair shafts.

Sue Alden

I just wanted to state that I was on that TAG. And I objected to the pressurization of stair shafts on buildings that are less than 75 feet high. That's an addition. The original change was to allow pressurized elevator shafts if you don't have a lobby. And we have evidently originally forgotten, or maybe it wasn't available, the specific requirements for pressurization of shafts. So this was originally to just pressurize the shafts according to the Seattle code, which is different than stairways. But in the TAG they also decided to pressurize stair shafts if the elevator shafts are not pressurized. And I personally don't feel that's necessary. I think it depends on where the stairs are. The degree of hazard to the stairs, if any, would depend upon where they are in relationship to the elevator. And I think adding that cost for non-high-rise buildings is a real cost burden.

Frank Mellas

Hi, Frank Mellas with Sound Investigative Engineers. I was also on that TAG. The reason the stairwells were included in that exception was so that when the shaft elevator is pressurized that it won't push the smoke into the stairwells, which is also a required exit. That's the reason it was put into this amendment. And it was basically brought up by the fire personnel that wanted that. And I think it's a good reason to do it, so that smoke doesn't go in through the stairs, because at the time of a fire you cannot use an elevator. You have to use the stairs. So that will help keep the smoke out of the stairwell.

Scott Rushing

On the same subject I was going to say that the inclusion of the stair shafts in the Exception 4 is new territory. Seattle's has had this same type of exception for quite some time. This is the first time stairs have been associated with this. The rest of the TAGs work here is very good, very needed code clarification. But the addition of stair shafts as a requirement seems above and beyond the call of duty here. And so I'm just here to say that it's basically going to kill this as a strategy in low-rise buildings if you ask me. That's going to triple the cost of this measure. It is a common method right now. The TAG's report said it was more expensive and not as common. It really is a very common strategy right now. And I really feel that adding the stairs in will make it cost-prohibitive and basically kill it for low-rise buildings.

Chris Whitmyre

I just wanted to echo that same sentiment relative to the addition of the stairwell. The technical matter at hand is do those stairwells even communicate with this required exit path that passes in front of an elevator. If they don't, then it does not make sense to be pressurizing stairwells and adding to the cost.

Energy Code

Tim explained changes proposed by the Energy Code TAG to the prescriptive compliance path for R-1 occupancies. He pointed out that the performance compliance path, as an alternative to the prescriptive path, is unaffected by these changes. Tim said an emergency rule is currently in effect for residential buildings over five stories, maintaining the 1990 energy code. The question before the Council today is whether or not to replace that emergency rule with a permanent rule.

Larry Andrews

We would like to support the duct tape issue. And, though we would have liked to have seen it not written as an exception, we'll take what we got. I think it is important that the tape is put on with manufacturer's recommendations and that the cleaning is done so the

tape will continue to stick for years afterwards. I think that's been the real problem, that the duct tape doesn't cling properly so the adhesive was attaching to the oils on the duct. And I think that addresses the problem.

I would like to talk about one other thing that has come up lately with the Energy TAG. [It] is about window area. Consistently we're hearing from people that we need to limit the size of windows in houses to cut the energy cost. Well, when you're talking to the customers out there, and then the customers are talking to the builders, and they're buying view property, these customers do not want to be limited to the amount of square footage of windows they put in. And I think that is an important thing that needs to be brought to this Council. I mean, customers don't pay large sums of money for view property to have their windows limited in area. It's energy-savings, but let's always give the customer the option so he can get the view that he desires. I think people work very hard for their money nowadays. Let's let them spend it the way they want to.

Sue Alden

Well, I guess the first item is the extension of the emergency rule. I think that's needed, and I hope that it dies the minute these proposed changes go into effect.

And I support the proposed changes for R-1 occupancies. It addresses the difference between a single-family dwelling, which has a small floor area and a small perimeter, and a multifamily building, which has a large floor area and a large perimeter, but many walls within that perimeter that don't need to be insulated. So there really is a different requirement between R-1 and R-3. I was glad to see that the TAG ignored the five-story, because there's nothing in the code that addresses five stories as a difference between one type of building and another. So R-1 does address the difference.

And the duct tape change I support because it appears to clarify what has always been a problem. What is duct tape? And where should it be used?

Sean Coney

Good morning. I am an architect, working for the firm Mithun in Seattle. I was on the TAG all last summer from June through September. I'm here to support the findings of the TAG. It was an exhaustive process that wore most of us out. And I would urge the Council to adopt it as we have written it. Bert Gregory, the President of Mithun, asked me to read a statement. Is that all right? It pretty well summarizes Mithun's position on this. And just so, for those of you not familiar with Mithun, we're one of the leaders in environmental design in the Northwest. We have more LEED certified staff than any other architectural firm. We don't take this kind of issue lightly. Okay, here's what Bert has to say:

Our experience is that the residential energy code has grown over the years from one that has had its foundation in the single-family residence. As such, it may have not fully recognized the issues surrounding high-rise residential development, constructability and affordability. Low-rise residential systems do not meet the

performance standards necessary in high-rise application, such as the wind loads at 200 feet. These high-rise structures need special windows, along with special high-performance doors at decks, a desirable feature by the market.

The stakeholder group was asked to study the amount of glazing allowed, and how to best achieve this. Given the available technology today, we feel the solution proposed for high-rise construction window area and U-value is correct, and that the energy study by the Northwest Energy Efficiency Alliance by Ecotope supports this. (Just an aside, during the TAG process I believe the Council hired Ecotope to do this study through the Northwest Energy Alliance. And I have copies of that if anyone needs one.) There are other current areas that we should focus these dollars to improve energy efficiency in a more effective manner, while the technology and affordability for residential high-rise window systems catches up in our state. We suggest this issue be revisited in three to five years, to see if new or low-cost technology is available.

From the forest rather than the details view, high-rise and multifamily housing is one of the best methods for our state to meet energy efficiency goals overall. A single-family house has five sides, including a roof, exposed to the exterior, where most high-density homes have only one side, sometimes two, exposed to this hot or cold. A high-density home also generally only has one side available to light, therefore requiring special strategies to ensure daylighting and marketability compared to single-family. Additionally the energy used on a per person basis in a single-family home is almost two to two and one-half times that of a high-density, multifamily home.

We feel it's critical for individuals and families to be offered livable, affordable, high-density urban homes, in order to support society's goals of the Growth Management Act. High-density housing also encourages in-fill in existing urban centers, helping our communities minimize new infrastructure investments, and freeing up these funds for other community uses. High-rise residential construction will be key to GMA effectiveness and effective mass transportation systems. High-rise residential housing is important to communities such as Seattle, Bellevue, Everett, Olympia, Vancouver, Spokane, Bellingham and other emerging urban centers. It must remain an attractive and marketable alternative to single-family living. Our efforts are to help in understanding the available data in order to provide the best code enhancement, meeting the goals of energy efficiency, livability and affordability.

We believe that the state should determine what our overall goals are, and target is, for energy consumption on a long-term basis, perhaps a 2020 plan, then work as a team to achieve these goals in a planned, multiyear effort. These goals should also create incentives for the use of renewable energies to the maximum extent possible.

Any questions? I have copies of this...

Mark Woerman

Good morning. Thank you. I'm Mark Woerman. I'm a principal with Collins-Woerman, an architectural firm in Bellevue. I'm really here to just stand in support of the comments that you just heard from my colleague, Sean Coney, and our colleagues at Mithun, well recognized for their innovations in the areas of energy conservation.

I'd like to encourage the Council to adopt the recommendations of the Technical Advisory Group as they are written. And I'd like to underscore the belief on our side as well as many of our design professional colleagues out there that it would be a major step backwards to adopt a "one-size fits all" approach to energy conservation as it relates to residential development in our state. We think that some of those moves are actually in direct conflict with the objectives of the state's adopted Growth Management Act in terms of what's really required to develop livable urban environments. So I would just encourage the Council please to move forward with the proposal as it's adopted.

Chris Whitmeyer

Thank you. I actually work for a design/build mechanical contractor, a registered mechanical engineer. I was a member of the TAG. We spent something like 30+ hours in meetings, something approaching 200 computer simulation runs, resulting in the proposal that you see in front of you. There was a vote at the end of that process. I believe it was 25 to 1. The one wasn't present.

So a few points to make. We did discover that the technology does exist to make the strict code that was about to go into effect, that was stopped by emergency rule. What we also discovered was that technology is not yet on the affordability curve. And when Sean mentioned revisiting this issue in about three years – yeah, somewhere in the two to three years – it would probably be appropriate, because even as we met over the course of the summer we did see some glazing pricing changes. So it will come.

Two, in order to encourage multifamily development in urban areas, we need flexibility in providing views and the aesthetics in order to encourage people to move into the urban centers. I coined the phrase, "If I don't get a backyard, I get a view." And you see how they market multifamily. They don't get backyards, but they want views.

The proposal is a compromise over what had been proposed. What price do we actually pay? Sean quoted the Department of Energy's statistics on a per-person basis. On a per-family basis, single-family uses three times that of multifamily, each family unit. So the price that you may pay in this compromise code is not nearly as much as you might at first assume.

My point number four is that we need this flexibility. And the flexibility is there in terms of the calculations, as well as the glazing that would be allowed.

We urge this Council to adopt this language. Thank you.

Patrick Hayes

Morning. I'm Patrick Hayes. I represent the Building Industry Association of Washington. And I'm an energy consultant and a TAG member who participated in all five meetings and, as Chris said, was 30+ hours of controversial, exhausting work.

We worked real hard. We had consensus at the end. It evolved from one spectrum of changing Table 5-1 in a calculated environment all the way to this averaging U-factors in the prescriptive. So [we] went 180 degrees. And after all that work I fully support the changes, as well as the Building Industry Association of Washington, in having R-3, which is single-family, separated from R-1 is really the best way, just because of the fact that R-1 only has one or two cold walls, versus a single-family outfit that basically has five or six if you include the floor, you know. This is not a rollback in the code. The option of averaging the U-values allows you to accommodate for structural environments like exposed slab edges that are part of the building and have to be there. When you average these components together, you still have to meet that prescriptive path. And that's a tough deal. You're going to be making it up in other walls. So it's not a rollback. It's added flexibility, which is what we've been promoting all along.

The TAG is made up of educated professionals that work in the design, the construction industry, the energy analysis industry. The vote was 25 to 1. Twenty-five professionals against one. Meaning it was pretty good consensus. I think it should possibly be revisited, and even the R-3 stuff, a little bit down the road to add some of this kind of flexibility back to R-3 for not only in the guise of saving energy, but in saving lumber and things like this, you know, by allowing alternatives, to use 2x4 wall construction, metal studs and alternative components. And those statements like that are actually in the statute of the code that, you know, we need to build the code to use alternative components and always be thinking, I guess, in one sense lesser, but not always on the energy side.

So, again, I fully support it. It was a lot of hard work. We didn't miss a meeting. And hope you pass this today.

Tony Gale

I'm Tony Gale. I'm a Seattle City architect. [I'm] pleased to be here this morning.

Mr. Chairman, the mayor sent a letter to you regarding adoption of this permanent rule. And I'd like to read it into the record this morning, if that's all right with you.

I would like to share the City of Seattle's concerns and recommendations with you as the State Building Code Council reviews the state energy code requirements for high-rise (over five stories) residential buildings. We have a vital interest in the outcome. Many of the projects affected by this proceeding will be constructed in Seattle. And state law prohibits Seattle from adopting its own energy code amendments for residential buildings.

We want to see the achievement of the same energy savings for low-rise and for high-rise residential buildings as the 2001 Washington State Energy Code (before the emergency rule). While we support tradeoff options that let designers choose how to achieve this level of overall energy efficiency, we oppose the relaxation of baseline requirements.

We believe it would be a disservice to the citizens of Seattle to require that the City of Seattle purchase more power for the next 30-50-100 years to serve less-efficient high-rise residential buildings. This is not good public policy, as this money will flow out of the city, out of the state and out of the region. It makes more sense to invest in energy efficiency, which results in more jobs and dollars staying in our local and state economy.

Seattle has a long history of relying on energy efficiency as the most cost-effective choice. Most recently we adopted changes in the Seattle code that improve energy efficiency by 15 to 20 percent for nonresidential buildings. We are also building all new city facilities over 5,000 square feet of occupied space to achieve a LEED Silver Rating. We've taken the steps that we can.

We urge the Council to reaffirm the standards for low-rise and high-rise residential buildings in the 2001 Washington State Energy Code. Thank you for your consideration.

Sincerely,
Greg Nickels, Mayor of Seattle

Just a couple of comments, if I could. The Technical Advisory Group has worked hard and long on this issue. I find it somewhat ironic that we're sitting here in an energy crisis today talking about the potential of reducing the baseline requirements in the energy code. The TAG was on the right track. In fact, the energy analysis report that they had completed – it came in two weeks after the fifth meeting on this particular subject – the report indicates the mechanical equipment efficiencies should be increased. But we never really had a chance to talk about that in an open forum. We would encourage the TAG to continue that effort and come back with an option that allows the energy efficiencies that we're looking for, as well as flexibility that's been talked about this morning from a variety of folks in the audience. The Council, from the City's opinion, should not adopt a permanent rule at this point. And the TAG should continue their effort. Any questions?

Kevin Watier

Kevin Watier, Snohomish County PUD. Just a comment on the adjusted software recommendations in the Wattsun program. Although the state does not support Wattsun anymore and is not going to update it, they do have a 2001 code spreadsheet on their website that is really close to Wattsun. That gets you through the proposed and required, and tells you if it qualifies -- So, I don't know if that could be added to the suggested ways of qualifying homes.

Lacking further testifiers, Jim adjourned the public hearing at 10:45 a.m.

WORK SESSION

Elevator Shaft Pressurization

Dave Saunders questioned whether the state building code limits the application of the code to high-rise buildings, specifically whether or not adopting the proposed elevator shaft pressurization amendment would affect Seattle. Al expressed doubt. Tim quoted a reference in the state building code, 19.27.060(4), that says the state building code shall not apply to any building four or more stories high with a B occupancy as defined by the 1982 edition of the UBC and with a city fire insurance rating of 1, 2 or 3 as defined by a recognized fire rating bureau or organization. Tim interprets that as granting cities and counties the ability to adopt any code for that specific class of buildings. While the City of Seattle may be an exception, Tim said generally speaking local jurisdictions use the state code. Sue Alden said she believes the City of Seattle has its own code except for 1-4-unit residences. Thus the elevator shaft proposal would not affect it. Jon Siu was unsure.

Dave Baker asked Steve Nuttall to further comment on the issue of smoke in stairwells. Steve first said that many jurisdictions with high-rises use model code language. However, the exception Tim quoted would give them the option of opting out if they so desire. Steve said he supports stairway pressurization for two chief reasons: it assists people exiting the building, and it assists firefighting activity. He noted the stairwell is primary to firefighting activity. Smoke migration into the stairway occurs every time the door is opened minus pressurization.

Steve noted a recent fire in Seattle that originated by the elevator. It allowed smoke migration to quickly permeate all floors of the building. In such an instance, Steve said, the only safe haven is in the stairway enclosure if it's pressurized. Addressing the cost issue of pressurization, Steve pointed out the real cost is for the emergency power supply, which is already provided.

Tim said Jon Siu served as Chair of the Elevator Shaft Pressurization TAG. John Cochran and Sue Alden both participated in TAG deliberations. Frank Mellas said he also served on that TAG. He noted that the proposal now before the Council is a consensus TAG recommendation.

Energy Code

Stan Price thanked all Energy TAG members for their hard work compiling the proposal before the Council. He spoke in support of the proposal, calling it a reasonable balance between energy efficiency and construction affordability, while offering flexibility. Stan said it structurally improves the code by separating multifamily from single-family construction. Attending TAG meetings for the City of Seattle was John Hogan, who attended all meetings except the last one. Stan said the city sent no alternate to that last meeting in John's absence. At that meeting all attending TAG members reached

consensus in the proposal before the Council. John Cochran said he attended several TAG meetings, at which he was impressed with the diligence and competence of TAG members.

Motion #1:

Peter DeVries moved that the energy code proposal be adopted by the Council as a permanent rule. Dave Saunders seconded the motion. By voice vote, the motion was unanimously adopted.

Motion #2:

Dave Baker moved that the permanent rule adopted in Motion #1 become effective on January 1, 2003, as an emergency rule for the 120 days preceding the effective date of the permanent rule. Dave Saunders seconded the motion. By voice vote, the motion was unanimously adopted.

Motion #3:

Steve Nuttall moved that the Council adopt the elevator shaft provision recommended by the Elevator Shaft Pressurization TAG. John Cochran seconded the motion. By voice vote, the motion was unanimously adopted.

STANDING COMMITTEES

Building, Fire and Plumbing Codes Committee

Dave Saunders called the Committee to order. Minutes of the combined Building, Fire, Plumbing and Mechanical, Ventilation, Energy Codes Committee meeting held on October 11, 2002 were approved as written. Dave called attention to an Island County noise level reduction ordinance that it adopted and is now asking the Council to approve.

Al Rhoades reminded Committee members that state law requires Council approval of locally adopted code amendments affecting one- to four-unit residential buildings before they become effective. Al noted that this ordinance appears to be identical to a City of Oak Harbor noise level reduction ordinance previously approved by the Council.

Mac McDonald, Island County Commissioner, said it's an update of their existing noise ordinance to make it the same as Oak Harbor's, standardizing noise reduction for builders and increasing flexibility. He encouraged the Council to adopt this ordinance, which recognizes that there are different zones around an airport.

Motion #4:

Steve Nuttall moved to approve Island County Ordinance No. 14.01B. Dave Baker seconded the motion.

Al called attention to an R-value on page 7 that he questioned, since other similar ordinances are for R-13 rather than R-19. Bob McCaughan, Island County building official, confirmed that R-13 is the correct insulation value.

Stan expressed concern about this ordinance interfacing with the Energy Code. He said that changing R-19 to R-13 places it below the minimum requirements of the Energy Code's prescriptive tables. Bob McCaughan said their ordinance is patterned after Oak Harbor's so builders in Island County are subject to uniform compliance. He noted those builders must still comply with the Energy Code. Island County's ordinance is not in conflict with the Energy Code according to Mr. McCaughan.

The question was called for. Motion #4 was unanimously adopted.

Dave Saunders moved to the next topic, a report of findings of the NFPA 5000 TAG. Tim said comments are still being received about this code. He encouraged Council members to review it carefully. At this time the report is a draft. Similarly the report of findings of the IRC TAG is a draft, since comments are still being received about it.

Tim said there was a request at the IRC TAG meeting about obtaining an ICC opinion about a procedure. That response has been received and is included in the draft report's addendum. A similar request was made at the NFPA TAG meeting about a Standards Council procedural question. Thus, relevant pages of its procedural manual are included in the NFPA TAG's report appendix.

Motion #5:

Dave Baker moved that the Committee receive the NFPA draft report and that the deadline for receiving further comments be December 10. John Cochran seconded the motion. By voice vote the motion was unanimously adopted.

Dave Saunders reported the above action taken by the Building, Fire & Plumbing Codes Committee, which recommends adoption of Island County Ordinance No. 14.01B and the draft report of the NFPA 5000 TAG.

Motion #6:

John Cochran moved Council approval of Island County Ordinance No. 14.01B and the NFPA 5000 TAG draft report. Dave Baker seconded the motion. By voice vote, the motion was unanimously adopted.

Legislative Committee

Chris Endresen reported that since Governor Locke's office has not reported on the two Governor-request bills, state building code adoption and Council fee increase, no business was conducted at the Committee meeting.

STAFF REPORT

Tim called attention to the proposed 2003 meeting schedule. He noted that conference calls are proposed each Thursday at 1 p.m. for the Legislative Committee during session. Six Council meetings are scheduled throughout the year, bimonthly. During interim months, committee conference calls are proposed as needed. Chris said the meetings proposed for January 10 and March 14 are conflicts for her. Thus the Friday, January 10, meeting was rescheduled for Thursday, January 9. Rescheduling the March meeting was postponed.

Motion #7: Peter DeVries moved to approve the 2003 meeting schedule as amended. Dave Saunders seconded the motion. The motion was unanimously adopted.

OTHER BUSINESS

Tim said he's been participating in the Joint Legislative Task Force on Green Buildings. Interest has been expressed at meetings in both the building and fire code processes. At issue are road widths, storm water runoff and waste control runoff. Narrower roads to avoid storm water runoff may conflict with the fire code. Product approval is another issue, which may be of concern to manufacturers. Tim said a Pierce County legislator expressed concern about regulatory prohibitions in the building code to alternative construction methods. That issue may be forwarded to this Council.

Tim noted that DOE storm water regulations continue to be an issue to track and study. Tim also said he has referred people requesting detailed information to Council members, and he asked if that is acceptable. Jim encouraged Council staff to use Council members as a resource to refer requestors to. Given such requests, however, he noted that legislative funding would be helpful and appropriate.

Lacking further business, the meeting was adjourned at 11:46 a.m.